

Remarks/Arguments

Applicant wishes to thank the Examiner for the careful review of the claims, specification, and drawings.

Claims

Independent claims 1 and 13 have been amended.

Dependent claims 2-12 and 14-24 have been amended.

After entry of this amendment, claims 1-24 are pending.

It is respectfully submitted that each and every feature recited in the amended drawing, specification and/or amended claims are fully supported in the specification as filed. No new subject matter has been added.

Rejections under 35 USC § 102

The Office Action argues that claims 1-4 and 6-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Vangal et al. (US2004/0193733), hereinafter “Vangal”. The Office Action further argues that claims 13-24 have similar limitations as to claims 1-12 and that they are rejected under the same rationale.

Applicant hereby amends independent claims 1 and 13, as follows:

1. (Currently amended) A method for optimizing establishing a network connection between a first device and a second device, said first device comprising a first packet protocol driver, a first application, a first socket layer disposed between said first protocol driver and said first application, and a first NIC driver, said second device comprising a second NIC driver, and a second packet protocol, said first packet protocol comprising a connection setup portion, said second protocol comprising a data transfer portion, said method comprising:

providing a first filter between said first socket layer and said first protocol driver, said first filter being external to said first NIC driver and first NIC hardware that is driven by said first NIC driver;

providing a first offload hardware in said first device;

providing a second filter in said second device;
receiving, using said first filter, a request from said first application through said first
socket layer;
examining, using said first filter, a transport handle in said request to determine
whether said connection is an offload connection;
processing said request to produce a packet set, said processing being performed by
said first offload hardware if said connection is an offload connection, said processing
being performed by said first protocol driver if said connection is not said offload
connection, said packet set including one or more ordered packets;
sending, using said first NIC driver and said first NIC hardware, said packet set to
said second device;
determining, using said second NIC driver, whether said packet set contains an
offload transport handle; and
passing said packet set to said second filter if said packet set contains said offload
transport handle.
initiating said network connection from said first device to said second device
using said first packet protocol;
receiving an acknowledgement from said second device; and,
initiating a data transfer between said first device and said second using said
second packet protocol.

13. (Currently amended) An apparatus for optimizing a network connection between a first device and a second device, said first device comprising a first packet protocol and a second packet protocol, said first packet protocol comprising a connection setup portion, said second protocol comprising a data transfer portion, comprising:

an application;
a socket layer;
a filter configured to receive a request from said application through said socket layer
and to examine a transport handle in said request for determining whether a connection
pertaining to said request is an offload connection;

a protocol driver configured to process said request into a packet set if said connection is not said offload connection, said packet set including one or more ordered packets;
an offload hardware configured to process said request into said packet set if said connection is said offload connection;
a NIC driver configured to transmit said packet set; and
NIC hardware driven by said NIC driver,
wherein said filter is disposed between said socket layer and said protocol driver and external to said NIC driver and said NIC hardware,
means for initiating said network connection from said first device to set second device using said first packet protocol;
means for receiving an acknowledgement from said second device; and,
means for initiating a data transfer between said first device and said second using said second packet protocol.

Support for the amendments to claims 1 and 13 may be found, for example, in one or more of paragraphs [0047], [0054], [0057], [0065], and [0067] as well as FIGs. 3 and 4A-D in this application.

The amended claim 1 is novel and nonobvious over Vangal. For example, the amended claim 1 includes providing a first filter between a first socket layer and a first protocol driver, using the first filter to receive a request from a first application through the first socket layer, and using the first filter to examine a transport handle in said request to determine whether said connection is an offload connection. In contrast, referring to, for example, paragraphs [0021] and [0027]-[0029] and FIGs. 1-3 in Vangal, although Vangal teaches providing a network protocol off-load engine to perform network protocol operations for a host and providing connection identifiers for a processor of the network protocol off-load engine to execute an appropriate set of protocol implementation instructions, Vangal does not teach providing a filter, and the connection identifiers taught by Vangal pertain to source and destination addresses and ports but are not used for determining whether connection-related data are to be processed by the network protocol off-load engine and are not examined by a filter.

The amended claim 13 is also novel and nonobvious over Vangal. For example, the amended claim 13 includes a filter configured to examine a transport handle in a request for determining whether a connection pertaining to the request is an offload connection.

Although Vangal teaches a network protocol off-load engine for performing network protocol operations for a host, Vangal does not teach a filter for examining a transport handle for determining whether data are to be processed by the network protocol off-load engine or the host.

Accordingly, Applicant respectfully submits that the amended claims 1 and 13 are not anticipated by Vangal.

Further, claims 2-4, 6-12, and 14-24 as amended are not anticipated by Vangal. The amendments to claims 2-4, 6-12, and 14-24 may be found, for example, in one or more of paragraphs [0044], [0046], [0047], and [0052] and FIGs. 3 and 4A-D in this application. It is respectfully submitted that claims 2-4 and 6-12 that depend from the amended claim 1 are also novel, nonobvious, and patentable not only due to their recitations of independently patentable features but also due to their dependence from the patentable parent amended claim 1. It is also respectfully submitted that claims 14-24 that depend from the amended claim 13 are also novel, nonobvious, and patentable not only due to their recitations of independently patentable features but also due to their dependence from the patentable parent amended claim 13.

No new subject matter has been added.

Rejections under 35 USC § 103

The Office Action argues that claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vangal as applied to claim 1 above, and further in view of Hayes (2003/0158906), herein after “Hayes”. In particular, the Office Action argues that Hayes teaches a method, wherein a first device comprises an operating system, the operating system comprises a first packet protocol (see Hayes, [0098]). Further, the Office Action argues that it would have been obvious to one having ordinary skill in the art at the time of the invention to modify Vangal to a method, wherein the first device comprises an operating system, the operating system comprises the first packet protocol in order to enable a host to offload the

most computationally intensive, memory bandwidth intensive and performance critical portions of the protocol processing task to an auxiliary processor without requiring the auxiliary processor to perform the full suite of functions necessary to perform a complete protocol processing offload (see Hayes, abstract).

Applicant hereby amends claim 5, as follows:

5. (Currently amended) The method of claim 1, wherein said transport handle pertains to at least one of hardware capabilities of said first device and a routing table, comprises an operating system, said operating system comprises said first packet protocol.

Applicant respectfully submits that modifying Vangal to a method does not result in claim 5 as amended. Specifically, Vangal does not teach providing a filter and does not teach examining a transport handle that pertains to at least one of hardware capabilities of the first device and a routing table using the filter. Neither does Hayes teach a transport handle pertaining to at least one of hardware capabilities and a routing table.

For the aforementioned reasons and others, it is respectfully submitted that claim 5 as amended is novel, nonobvious, and patentable over the cited art, alone or in combination, not only due to recitations of independently patentable features but also due to dependence from the patentable parent amended claim 1.

No new subject matter has been added.

Conclusion

In view of the discussion herein, Applicant believes that all pending claims are allowable and respectfully request a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at 408-257-5500.

Applicant(s) hereby petitions for a (1) one- month(s) extension of time. A credit card payment in the amount of \$120.00 for payment of extension of time fee is submitted herewith. If any additional petition is required to facilitate the entry of the present amendment, please consider this communication a petition therefore as well. The Commissioner is authorized to charge any fees beyond the amount enclosed which may be required, or to credit any overpayment, to Deposit Account No. 50-2284 (Order No. ATEC-P011/SNG-031A).

Respectfully submitted,

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